



TRIODE-PENTODE

DESCRIPTION AND RATING

The 6JN8 is a miniature tube containing a sharp-cutoff pentode and a medium-mu triode.

GENERAL

ELECTRICAL

Cathode-Coated Unipotential

	Series Heater Operation	Parallel Heater Operation	
Heater Characteristics and Ratings			
Heater Voltage, AC or DC	6.3	$6.3 \pm 0.6^*$	Volts
Heater Current	$0.45 \pm 0.03^\dagger$	0.45^\ddagger	Amperes
Heater Warm-up Time§	11	—	Seconds

Direct Interelectrode Capacitances¶

Pentode Section

Grid-Number 1 to Plate,

maximum: (g1 to p).....0.01 pf

Input: Pg1 to (h+Pk+Pg2+Pg3+i.s.)..5.5 pf

Output: Pp to (h+Pk+Pg2+Pg3+i.s.)..3.4 pf

Triode Section

Grid to Plate: (g to p).....1.7 pf

Input: g to (h+Tk+Pk+Pg3+i.s.)....3.2 pf

Output: p to (h+Tk+Pk+Pg3+i.s.)....2.2 pf

MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button 9-Pin

Outline Drawing—EIA 6-2

Maximum Diameter.....7/8 Inches

Maximum Over-all Length.....2 3/16 Inches

Maximum Seated Height.....1 15/16 Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

	Pentode Section	Triode Section	
Plate Voltage	300	300	Volts
Screen Supply Voltage	300	—	Volts
Screen Voltage—See Screen Rating Chart			
Positive DC Grid-Number 1 Voltage	0	0	Volts
Plate Dissipation	2.5	2.5	Watts
Screen Dissipation	0.55	—	Watts

Pentode Triode
Section Section

Heater-Cathode Voltage

Heater Positive with Respect to Cathode

DC Component.....100 100 Volts

Total DC and Peak.....200 200 Volts

Heater Negative with Respect to Cathode

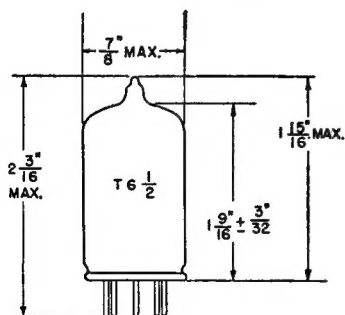
Total DC and Peak.....200 200 Volts

Grid-Number 1 Circuit Resistance

With Fixed Bias.....2.2 2.2 Megohms

With Cathode Bias.....2.2 2.2 Megohms

PHYSICAL DIMENSIONS



EIA 6-2

TERMINAL CONNECTIONS

Pin 1—Triode Grid

Pin 2—Triode Plate

Pin 3—Triode Cathode

Pin 4—Heater

Pin 5—Heater

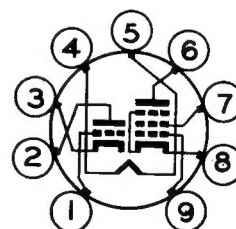
Pin 6—Pentode Plate

Pin 7—Pentode Grid Number 2
(Screen)

Pin 8—Pentode Cathode, Grid
Number 3 and Internal
Shield

Pin 9—Pentode Grid Number 1

BASING DIAGRAM



EIA 9FA

MAXIMUM RATINGS (Cont'd)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION**AVERAGE CHARACTERISTICS**

	Pentode Section	Triode Section	
Plate Voltage	125	125	Volts
Screen Voltage	125	—	Volts
Grid-Number 1 Voltage	-1.0	-1.0	Volts
Amplification Factor	—	46	
Plate Resistance, approximate	200000	5400	Ohms
Transconductance	7500	8500	Micromhos
Plate Current	12	13.5	Milliamperes
Screen Current	4.0	—	Milliamperes
Grid-Number 1 Voltage, approximate $I_b = 10$ Microamperes	-8	-8	Volts

NOTES

- * For parallel heater operation, the equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- † For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
- ‡ Heater current of a bogey tube at $E_f = 6.3$ volts.
- § The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.
- ¶ With external shield (EIA 315) connected to cathode of section under test.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or ele-

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FOR CURVES PLEASE REFER TO 19JN8**RECEIVING TUBE DEPARTMENT****GENERAL  ELECTRIC****Owensboro, Kentucky**